



## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,989	04/05/2001	Jed W. Fahey	046585/0138	4463
22428	7590	10/06/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			KRASS, FREDERICK F	
			ART UNIT	PAPER NUMBER
			1614	

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/825,989	FAHEY ET AL.
Examiner	Art Unit	
Frederick Krass	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 November 2005.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 48-63 and 65-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 48-57 is/are allowed.
- 6) Claim(s) 58-63 and 65-71 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

**Claim Informalities**

Claim 60, first line, immediately after "is" there should be inserted – at ---

**Previous Rejections**

Unless specifically maintained infra, all previous rejections are withdrawn.

Because the new grounds of rejections which follow were not necessitated by Applicant's amendment, this action is NON-FINAL.

**Nonstatutory (Obviousness-Type) Double Patenting Rejection**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 58-63 and 65-71 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6-8 and 11-33 of U.S. Patent No. 6,177,122. Although the conflicting claims are not identical, they are not patentably distinct from each other because it is obvious on its face that the methods of the instant claims will necessarily result in foods falling within the scope of the conflicting claims. Note that during prosecution of the patent restriction was required between 1) sprouts 2) foods 3) solvent extracts and 4) pills/tablets. See paper no. 9, dated 9/21/99. No restriction was made between food products and the methods used to make them. Accordingly, an obviousness-type double patenting rejection is appropriate in this instance.

#### **Discussion: State of the Prior Art at Time of Filing**

As previously argued by Applicant, the prior art of record actually teaches away from the instantly claimed methods for making foods. Specifically, Jones et al (USP 4,158,656) notes at column 3, lines 48-53 that glucosinolates and isothiocyanates should be removed prior to making any food products. Anjou et al (USP 4,083,836) discloses substantially the same.

Furthermore, the prior art of record also teaches away from harvesting vegetables up to and including the 2-leaf stage. See for instance Pusateri et al (USP 5,686,108) at column 2, lines 48-51, which notes that mature broccoli florets are preferable to other

parts of the plant because of their higher nitrile content. Accordingly, no issue of obviousness-type double patenting is seen with regard to claims relating to methods of making food products in which selection of same is required in USP 5,698,567 and USP 5,725,895.

### **Allowable Subject Matter**

Claims 48-57 are allowable as presently advised.

The prior art of record does not fairly suggest, teach or disclose extracting glucosinolates and isothiocyanates from plant tissue using a combination of DMSO, acetonitrile and DMF as recited instantly, as discussed in detail in Applicant's response.

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick Krass whose telephone number is (571) 272-0580. The examiner can normally be reached on Monday-Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached at (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

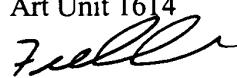
Application/Control Number: 09/825,989

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick Krass  
Primary Examiner  
Art Unit 1614



<b>Notice of References Cited</b>		Application/Control No.	Applicant(s)/Patent Under Reexamination	
		09/825,989	FAHEY ET AL.	
Examiner		Frederick Krass	Art Unit	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,686,108	11-1997	Pusateri et al.	424/464
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Search Notes</b>				Application/Control No.	Applicant(s)/Patent under Reexamination	
				09/825,989	FAHEY ET AL.	
Examiner				Art Unit		
Frederick Krass				1614		
<b>SEARCHED</b>				<b>SEARCH NOTES (INCLUDING SEARCH STRATEGY)</b>		
Class	Subclass	Date	Examiner	Inventor name search on PALM.	9/29/2006	FK
				Searches conducted by the examiner on EAST and STN databases. See attached printouts.	9/29/2006	FK
<b>INTERFERENCE SEARCHED</b>				<b> </b>		
Class	Subclass	Date	Examiner			



Atty. Dkt. No. 046585-0138

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**Applicant: Jed FAHEY *et al.*

Title: CANCER CHEMOPROTECTIVE FOOD PRODUCTS

Appl. No.: 09/825,989

Filing Date: 4/5/2001

Examiner: FF Krass

Art Unit: 1614

**AMENDMENT AND REPLY UNDER 37 CFR § 1.111**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Non-Final Office Action dated October 6, 2006, concerning the above-referenced patent application.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this document.

**Remarks/Arguments** begin on page 5 of this document.

Please amend the application as follows:

Atty. Dkt. No. 046585-0138

**Amendments to the Claims:**

This listing of claims will replace all prior versions of claims in the application:

**Listing of Claims:**

Claims 1-47. (Canceled).

Claim 48. (Previously Presented): A method of extracting glucosinolates and isothiocyanates from plant tissue comprising homogenizing said plant tissue in an excess of a mixture of dimethyl sulfoxide, acetonitrile and dimethylformamide at a temperature sufficient to inactivate myrosinase enzyme activity.

Claim 49. (Previously Presented): The method of claim 48, wherein the ratio of dimethyl sulfoxide:acetonitrile:dimethylformamide is 1:1:1.

Claim 50. (Previously Presented): The method of claim 48, wherein said temperature is between 0°C and the freezing temperature of the extraction mixture.

Claim 51. (Previously Presented): The method of claim 48, wherein said temperature is between -50°C and the freezing temperature of the extraction mixture.

Claim 52. (Previously Presented): The method of claim 48, wherein said plant tissue is rich in glucosinolates.

Claim 53. (Previously Presented): The method of claim 52, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants or plant parts.

Claim 54. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 55. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Atty. Dkt. No. 046585-0138

Claim 56. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 57. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 58. (Previously Presented): A method of making a food product comprising extracting glucosinolates and isothiocyanates from plant tissue having at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential, recovering said glucosinolates and isothiocyanates and adding said glucosinolates and isothiocyanates to food;

wherein said extracting comprises contacting said plant tissue with a non-toxic solvent at a temperature sufficient to inactivate myrosinase enzyme activity.

Claim 59. (Previously Presented): The method according to claim 58, wherein said solvent is water.

Claim 60. (Currently Amended): The method of claim 59, wherein said water is at 100°C.

Claim 61. (Previously Presented): The method according to claim 58, wherein said solvent is liquid carbon dioxide.

Claim 62. (Previously Presented): The method according to claim 58, wherein said solvent is ethanol.

Claim 63. (Previously Presented): The method of claim 58, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants and plant parts.

Claim 64. (Canceled).

Atty. Dkt. No. 046585-0138

Claim 65. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 66. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 67. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 68. (Previously Presented): The method of claim 58 wherein said food product is selected from the group consisting of a bread, a drink, a soup, a salad, a sandwich and a cereal.

Claim 69. (Previously Presented): The method of claim 68 wherein said drink is a tea.

Claim 70. (Previously Presented): The method of claim 58 wherein said extracting further comprises homogenizing said plant tissue with said non-toxic solvent.

Claim 71. (Previously Presented): The method of claim 63 wherein said sprouts, seeds, plants or plant parts have at least 250,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Atty. Dkt. No. 046585-0138

**REMARKS****I. Introduction**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-47 and 64 are requested to be canceled. The cancellation of claims does not constitute acquiescence in the propriety of any rejection set forth by the Examiner. Applicants reserve the right to pursue the subject matter of the canceled claims in subsequent divisional applications.

Claim 60 is currently amended.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

Upon entry of this Amendment, claims 48-63 and 65-71 will remain pending in the application.

Because the foregoing amendments do not introduce new matter, entry thereof by the Examiner is respectfully requested.

**II. Response to Issues Raised by Examiner in Outstanding Office Action****a. Claim Informalities**

Applicants have amended the claims as requested by the Examiner and respectfully request withdrawal of the objection.

**b. Issues Under Double Patenting**

Claims 58-63 and 65-71 were rejected on the ground of nonstatutory obviousness-type double patenting as being allegedly unpatentable over claims 6-8 and 11-33 of U.S. Patent No. 6,177,122 ("the '122 patent"). Office Action, p. 3.

Atty. Dkt. No. 046585-0138

Attached herewith is a terminal disclaimer which disclaims the terminal part of the term of any patent granted on the captioned patent application which would extend beyond the full statutory term, as shortened by any terminal disclaimer, of the '122 patent. Therefore, the rejection is moot.

Atty. Dkt. No. 046585-0138

**CONCLUSION**

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date November 22, 2006

By Richard C. Peet

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5483  
Facsimile: (202) 672-5399

Richard C. Peet  
Attorney for Applicant  
Registration No. 35,792

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING  
REJECTION OVER A "PRIOR" PATENT

Docket Number (Optional)

In re Application of: FAHEY et al.

Application No.: 09/825,989

Filed: April 5, 2001

For: CANCER CHEMOPROTECTIVE FOOD PRODUCTS

The owner\*, John Hopkins School of Medicine, of 100% percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term prior patent No. 6,177,122 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

expires for failure to pay a maintenance fee; 11/24/2006 RBERHE 03800041 09825989  
is held unenforceable; 91 FC:2814 65.00 0P  
is found invalid by a court of competent jurisdiction; is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; has all claims canceled by a reexamination certificate; is reissued; or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1.  For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2.  The undersigned is an attorney or agent of record. Reg. No. 35,792



Signature

11/23/06  
Date

Richard C. Peet

Typed or printed name

202-672-5483  
Telephone Number

Terminal disclaimer fee under 37 CFR 1.20(d) included.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

\*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



16148

Atty. Dkt. No. 037677-0256

***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***

Applicant: Jed FAHEY et al.

Title: CANCER  
CHEMOPROTECTIVE FOOD  
PRODUCTS

Appl. No.: 09/825,989

Filing Date: 4/5/2001

Examiner: Frederick F. Krass

Art Unit: 1614

Confirmation  
Number: 4463**AMENDMENT TRANSMITTAL**

Mail Stop Amendment  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an amendment in the above-identified application.

Small Entity status under 37 C.F.R. § 1.9 and § 1.27 has been established by a previous assertion of Small Entity status.

Assertion of Small Entity status is enclosed.

The fee required for additional claims is calculated below:

	Claims As Amended	Previously Paid For	Extra			Additional Rate	\$0.00
			Claims Present	x	\$50.00		
Total Claims:	23	-	23	=	0	x	\$0.00

Atty. Dkt. No. 037677-0256

Independent Claims:	2	-	3	=	0	x	\$200.00	=	\$0.00
First presentation of any Multiple Dependent Claims:				+	\$360.00			=	\$0.00
							CLAIMS FEE TOTAL	=	\$0.00

[ ] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[ ] Extension for response filed within the first month:	\$120.00	\$0.00
[ ] Extension for response filed within the second month:	\$450.00	\$0.00
[ ] Extension for response filed within the third month:	\$1,020.00	\$0.00
[ ] Extension for response filed within the fourth month:	\$1,590.00	\$0.00
[ ] Extension for response filed within the fifth month:	\$2,160.00	\$0.00
	EXTENSION FEE TOTAL:	\$0.00
[X] Statutory Disclaimer Fee under 37 C.F.R. 1.20(d):	\$130.00	\$130.00
	CLAIMS, EXTENSION AND DISCLAIMER FEE TOTAL:	\$130.00
[X] Small Entity Fees Apply (subtract ½ of above):		\$65.00
	Extension Fees Previously Paid:	\$0.00
	TOTAL FEE:	\$65.00

A credit card payment form in the amount of \$65.00 is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Atty. Dkt. No. 037677-0256

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date November 22, 2006

By Richard Peet

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5483  
Facsimile: (202) 672-5399

Richard C. Peet  
Attorney for Applicant  
Registration No. 35,792

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875				Application or Docket Number 09/825,989	Filing Date 04/05/2001	<input type="checkbox"/> To be Mailed			
<b>APPLICATION AS FILED – PART I</b>									
(Column 1)			(Column 2)		SMALL ENTITY <input checked="" type="checkbox"/> OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A		N/A				
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A		N/A				
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A		N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$ =		X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =		X \$ =				
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.									
TOTAL									
TOTAL									
<b>APPLICATION AS AMENDED – PART II</b>									
(Column 1)			(Column 2)		(Column 3)				
AMENDMENT	11/22/2006	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	SMALL ENTITY OR OTHER THAN SMALL ENTITY			
	Total (37 CFR 1.16(j))	* 23	Minus	** 23	= 0	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X \$25 =	0	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					X \$100 =	0	X \$ =	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	TOTAL ADD'L FEE								
	0								
TOTAL ADD'L FEE									
(Column 1)									
(Column 2)									
(Column 3)									
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	SMALL ENTITY OR OTHER THAN SMALL ENTITY			
	Total (37 CFR 1.16(j))	*	Minus	**	=	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					X \$ =		X \$ =	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	TOTAL ADD'L FEE								
	0								
TOTAL ADD'L FEE									
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.									
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".									
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".									
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									
Legal Instrument Examiner: Brenda Webb									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**  
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

<b>Application Number</b> 	<b>Application/Control No.</b> 09/825,989	<b>Applicant(s)/Patent under Reexamination</b> FAHEY ET AL.
<b>Document Code - DISQ</b>		<b>Internal Document – DO NOT MAIL</b>

<b>TERMINAL DISCLAIMER</b>	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed : 22 Nov. 2006	<b>This patent is subject to a Terminal Disclaimer</b>	

<b>Approved/Disapproved by:</b>  Dorethea Lawrence
--

U.S. Patent and Trademark Office

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FILE COVERS 1907 - 17 Feb 2007 VOL 146 ISS 9  
 FILE LAST UPDATED: 16 Feb 2007 (20070216/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> que glucosinolate  
 L1 QUE GLUCOSINOLATE

=> que isothiocyanate  
 L2 QUE ISOTHIOCYANATE

=> que l1 and l2  
 L3 QUE L1 AND L2

=> que plant or vegetable or sprout or cruciferous or broccoli  
 L4 QUE PLANT OR VEGETABLE OR SPROUT OR CRUCIFEROUS OR BROCCOLI

=> que extract?  
 L5 QUE EXTRACT?

=> que l3 and l4 and l5  
 L6 QUE L3 AND L4 AND L5

=> s 16  
 2404 GLUCOSINOLATE  
 24943 ISOTHIOCYANATE  
 823279 PLANT  
 90817 VEGETABLE  
 3721 SPROUT  
 1093 CRUCIFEROUS  
 3012 BROCCOLI  
 312781 EXTRACT?  
 L7 10 L3 AND L4 AND L5



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,989	04/05/2001	Jed W. Fahey	046585/0138	4463
22428	7590	02/23/2007	EXAMINER	
FOLEY AND LARDNER LLP			KRASS, FREDERICK F	
SUITE 500			ART UNIT	PAPER NUMBER
3000 K STREET NW			1614	
WASHINGTON, DC 20007				
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/825,989	FAHEY ET AL.	
	Examiner	Art Unit	
	Frederick Krass	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 November 2006.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 48-63 and 65-71 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 48-51 is/are allowed.  
 6) Claim(s) 52,53,58-62 and 68-70 is/are rejected.  
 7) Claim(s) 54-57, 63, 65-67 and 71 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**Status of Case**

Unless specifically repeated infra, all previous rejections are withdrawn.

New grounds of rejection follow which were not necessitated by Applicant's amendment. Accordingly, this action is NON-FINAL.

**Written Description Rejection**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 52, 58-62 and 68-70 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification sets forth assays for screening plants to identify those that are "rich" in glucosinolates, i.e., those having high Phase II enzyme-inducing potential (= at least 200,000 units per gram fresh weight of Phase II enzyme-inducing potential). See page 3, lines 7-26, and page 17, lines 5-11. The state of the art (even after the filing date of the instant application), however, is such that one skilled in the art would expect same

only in cruciferous plants. See USP 6,991,811 at the passage bridging column 1, line 59 to column 2, line 10. Nowhere does the instant specification specify which particular plant genera have high Phase II enzyme-inducing potential, other than cruciferous plants.<sup>1</sup> Accordingly, the mere disclosure of an assay which is potentially useful for discovering other plant genera having these desired characteristics does not place such additional genera in applicant's possession; instead, it merely represents a "wish or plan" for doing so. See Univ. of Rochester v. G.D. Searle, 69 USPQ2d 1886 (CAFC 2004); see also Univ. of Cal. v. Eli Lilly, 119 F.3d 1559, 1568 (Fed. Cir. 1997).

This position is also consistent with earlier precedent holding that the activity of plant extracts is unpredictable beyond individual genera. See In re Sichert, 196 USPQ 209 (CCPA 1977). Furthermore, it is reflected in the observation that USP 6,991,811, which employed an assay substantially similar to that disclosed by applicant (see column 2, lines 11-23 of the prior art), was able to discover only one additional plant genera (*Echinacea*) high in phase II enzyme-inducing potential, and then only within certain extract fractions.

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<sup>1</sup> The examiner interprets the language used in instant claims 53 and 63 as reciting cruciferous seeds, cruciferous plants, or cruciferous plant parts, i.e., a recitation of alternative members within a Markush group.

**Indefiniteness Rejection**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "rich" in claim 52 is a relative term which renders the claim indefinite. The term "rich" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

As used in the instant claims and specification, the term "rich" is essentially meaningless. No limiting definition of the term appears to be provided; instead, the specification uses the term in very loose and general fashion. Note for instance the description at page 1, line 24 of plants "extremely rich" in glucosinolates. Since no definition of "rich" is ever provided, it is impossible to determine what substantive difference there is between "rich" and "extremely rich" (and by implication "poor" in glucosinolates).

**Allowable Subject Matter**

Claims 48-51 remain allowable as presently advised.

Claims 54-57, 63, 65-67 and 71 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick Krass whose telephone number is (571) 272-0580. The examiner can normally be reached at (571) 272-0580 on Monday through Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, can be reached at (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Application/Control Number: 09/825,989

Page 6

Art Unit: 1614

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick Krass  
Primary Examiner  
Art Unit 1614



<b>Notice of References Cited</b>		Application/Control No.	Applicant(s)/Patent Under Reexamination FAHEY ET AL.	
		09/825,989	Examiner	Art Unit
Frederick Krass		1614	Page 1 of 1	

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,991,811	01-2006	Brovelli et al.	424/725
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

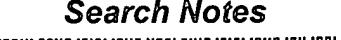
**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Search Notes</b> 	<b>Application/Control No.</b> 09/825,989	<b>Applicant(s)/Patent under Reexamination</b> FAHEY ET AL.
	<b>Examiner</b> Frederick Krass	<b>Art Unit</b> 1614

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective October 1, 2000

Application or Docket Number

**CLAIMS AS FILED - PART I**

(Column 1) (Column 2)

TOTAL CLAIMS	20	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	20 minus 20 =	0
INDEPENDENT CLAIMS	2 minus 3 =	0
MULTIPLE DEPENDENT CLAIM PRESENT		<input type="checkbox"/>

SMALL ENTITY  
TYPE OR OTHER THAN  
SMALL ENTITY

RATE	FEES	RATE	FEES
BASIC FEE	355.00	OR BASIC FEE	710.00
X\$ 9=		OR X\$18=	
X40=		OR X80=	
+135=		OR +270=	
TOTAL	355	OR TOTAL	

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

(Column 1) (Column 2) (Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	26	Minus	22 = 2
Independent	2	Minus	3	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

SMALL ENTITY OR OTHER THAN  
SMALL ENTITY

RATE	ADDITIONAL FEE	RATE	ADDITIONAL FEE
X\$ 9=	50.00	OR X\$18=	100.00
X40=		OR X80=	
+135=		OR +270=	
TOTAL ADDIT. FEE	50.00	OR TOTAL ADDIT. FEE	

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus	**	=
Independent	Minus	***		=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

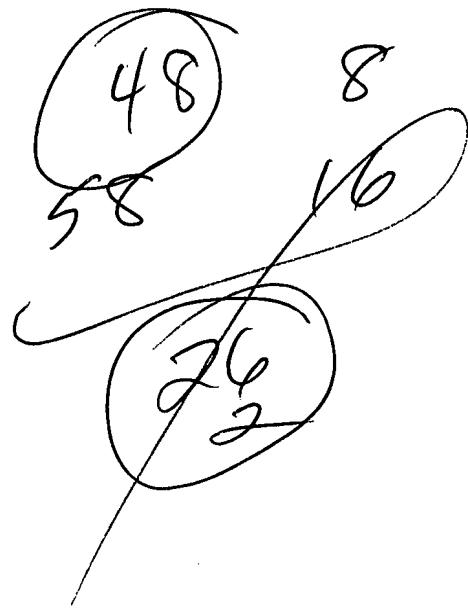
RATE	ADDITIONAL FEE	RATE	ADDITIONAL FEE
X\$ 9=		OR X\$18=	
X40=		OR X80=	
+135=		OR +270=	
TOTAL ADDIT. FEE		OR TOTAL ADDIT. FEE	

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus	**	=
Independent	Minus	***		=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

RATE	ADDITIONAL FEE	RATE	ADDITIONAL FEE
X\$ 9=		OR X\$18=	
X40=		OR X80=	
+135=		OR +270=	
TOTAL ADDIT. FEE		OR TOTAL ADDIT. FEE	

- \* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
- \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
- \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



48 8  
58 16  
26 22

A series of handwritten numbers are arranged in a network of lines. At the top left is a circle containing '48'. A line extends from the bottom right of '48' to the top left of a circle containing '8'. Another line extends from the bottom right of '8' to the top left of a circle containing '16'. From the bottom right of '16', a line extends to the top left of a circle containing '26'. From the bottom right of '26', a line extends to the top left of a circle containing '22'. There is also a small circle containing '58' located between '48' and '16'.

Atty. Dkt. No. 037677-0256

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**16 14/10  

Applicant: Jed FAHEY et al.

Title: CANCER  
CHEMOPROTECTIVE FOOD  
PRODUCTS

Appl. No.: 09/825,989

Filing Date: 4/5/2001

Examiner: Delacroix-Muirheid, Cybille

Art Unit: 1614

Confirmation 4463

Number:

**AMENDMENT TRANSMITTAL**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an amendment in the above-identified application.

Small Entity status under 37 C.F.R. § 1.9 and § 1.27 has been established by a previous assertion of Small Entity status.

Assertion of Small Entity status is enclosed.

The fee required for additional claims is calculated below:

	Claims		Extra		Additional	Claims Fee
	As	Previously	Claims	Present		
	Amended	Paid For			Rate	
Total Claims:	26	-	24	=	2	x \$50.00 = \$100.00

Atty. Dkt. No. 037677-0256

Independent Claims:	2	-	3	=	0	x	\$200.00	=	\$0.00
First presentation of any Multiple Dependent Claims: + \$360.00 =									\$0.00
CLAIMS FEE TOTAL =									\$100.00

[ ] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[ ] Extension for response filed within the first month:	\$120.00	\$0.00
[ ] Extension for response filed within the second month:	\$450.00	\$0.00
[ ] Extension for response filed within the third month:	\$1,020.00	\$0.00
[ ] Extension for response filed within the fourth month:	\$1,590.00	\$0.00
[ ] Extension for response filed within the fifth month:	\$2,160.00	\$0.00
EXTENSION FEE TOTAL: \$0.00		
[ ] Statutory Disclaimer Fee under 37 C.F.R. 1.20(d):	\$130.00	\$0.00
CLAIMS, EXTENSION AND DISCLAIMER FEE TOTAL: \$100.00		
[ X ] Small Entity Fees Apply (subtract ½ of above):	\$50.00	
Extension Fees Previously Paid: \$0.00		
TOTAL FEE: \$50.00		

A credit card payment form in the amount of \$50.00 is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Atty. Dkt. No. 037677-0256

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date

March 29, 2007

By

Richard Peet

FOLEY & LARDNER LLP  
Customer Number: 22428  
Telephone: (202) 672-5483  
Facsimile: (202) 672-5399

Richard C. Peet  
Attorney for Applicant  
Registration No. 35,792



Atty. Dkt. No. (Old) 046585-0138  
Atty. Dkt. No. (New) 037677-0256

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Jed FAHEY *et al.*

## Title: CANCER CHEMOPROTECTIVE FOOD PRODUCTS

Appl. No.: 09/825,989

Filing Date: 4/5/2001

Examiner: FF Krass

Art Unit: 1614

**AMENDMENT AND REPLY UNDER 37 CFR § 1.111**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Non-Final Office Action dated February 23, 2007, concerning the above-referenced patent application.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this document.

**Remarks/Arguments** begin on page 5 of this document.

Please amend the application as follows:

04/02/2007 HMARZI1 00000057 09825989

01 FC:2202

**50.00 OP**

Atty. Dkt. No. (Old) 046585-0138  
Atty. Dkt. No. (New) 037677-0256

**Amendments to the Claims:**

This listing of claims will replace all prior versions of claims in the application:

**Listing of Claims:**

Claims 1-47. (Canceled).

Claim 48. (Previously Presented): A method of extracting glucosinolates and isothiocyanates from plant tissue comprising homogenizing said plant tissue in an excess of a mixture of dimethyl sulfoxide, acetonitrile and dimethylformamide at a temperature sufficient to inactivate myrosinase enzyme activity.

Claim 49. (Previously Presented): The method of claim 48, wherein the ratio of dimethyl sulfoxide:acetonitrile:dimethylformamide is 1:1:1.

Claim 50. (Previously Presented): The method of claim 48, wherein said temperature is between 0°C and the freezing temperature of the extraction mixture.

Claim 51. (Previously Presented): The method of claim 48, wherein said temperature is between -50°C and the freezing temperature of the extraction mixture.

Claim 52. (Canceled)

Claim 53. (Currently Amended): The method of claim 48, claim 52, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants or plant parts.

Claim 54. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 55. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

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Claim 56. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 57. (Previously Presented): The method of claim 53, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 58. (Currently Amended): A method of making a food product comprising extracting glucosinolates and isothiocyanates from cruciferous plant tissue having at least 200,000 units per gram fresh weight of Phase 2 enzyme-inducing potential, recovering said glucosinolates and isothiocyanates and adding said glucosinolates and isothiocyanates to food;

wherein said extracting comprises contacting said plant tissue with a non-toxic solvent at a temperature sufficient to inactivate myrosinase enzyme activity.

Claim 59. (Previously Presented): The method according to claim 58, wherein said solvent is water.

Claim 60. (Previously Presented): The method of claim 59, wherein said water is at 100°C.

Claim 61. (Previously Presented): The method according to claim 58, wherein said solvent is liquid carbon dioxide.

Claim 62. (Previously Presented): The method according to claim 58, wherein said solvent is ethanol.

Claim 63. (Previously Presented): The method of claim 58, wherein said plant tissue is selected from the group consisting of cruciferous sprouts measured after 3 days of growth, cruciferous seeds, plants and plant parts.

Claim 64. (Canceled).

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Claim 65. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 300,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 66. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 400,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 67. (Previously Presented): The method of claim 63, wherein said sprouts, seeds, plants or plant parts have at least 500,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 68. (Previously Presented): The method of claim 58 wherein said food product is selected from the group consisting of a bread, a drink, a soup, a salad, a sandwich and a cereal.

Claim 69. (Previously Presented): The method of claim 68 wherein said drink is a tea.

Claim 70. (Previously Presented): The method of claim 58 wherein said extracting further comprises homogenizing said plant tissue with said non-toxic solvent.

Claim 71. (Previously Presented): The method of claim 63 wherein said sprouts, seeds, plants or plant parts have at least 250,000 units per gram fresh weight of Phase 2 enzyme-inducing potential.

Claim 72. (New) The method of claim 63, wherein said plants are broccoli.

Claim 73. (New) The method of claim 63, wherein said plant parts are from broccoli.

Claim 74. (New) The method of claim 63, wherein said cruciferous sprouts are broccoli sprouts.

Claim 75. (New) The method of claim 63, wherein said cruciferous seeds are broccoli seeds.

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## REMARKS

### I. Introduction

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Applicants thank Examiner Krass for the courtesy of a telephone interview on March 27, 2007. The amendments and remarks provided herein reflect the content of that interview.

Claims 1-47, 52, and 64 are requested to be canceled. The cancellation of claims does not constitute acquiescence in the propriety of any rejection set forth by the Examiner. Applicants reserve the right to pursue the subject matter of the canceled claims in subsequent divisional applications.

Claim 53 and 58 are currently amended.

Claims 72-75 are new. Support for claims 72-75 can be found throughout the application and in the results from Examples 1-10.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

Upon entry of this Amendment, claims 48-51, 53-63 and 65-75 will remain pending in the application.

Because the foregoing amendments do not introduce new matter, entry thereof by the Examiner is respectfully requested.

### II. Response to Issues Raised by Examiner in Outstanding Office Action

#### **a. Claim Rejections - 35 U.S.C. § 112, Second Paragraph**

Claims 52 and 53 are rejected by the Examiner under 35 U.S.C. § 112, second paragraph as being allegedly indefinite. The Examiner asserts that the term "rich" is allegedly

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unclear. Office Action, p. 4. Applicants have canceled claim 52 rendering the rejection moot. Applicant respectfully requests reconsideration and withdrawal of the rejection.

**b. Claim Rejections - 35 U.S.C. § 112, First Paragraph**

Claims 52, 58-62 and 68-70 are rejected by the Examiner under 35 U.S.C. § 112, first paragraph for lack of written description. The Examiner asserts, "Nowhere does the instant specification specify which particular genera have high Phase II enzyme-inducing potential, other than cruciferous plants." See Office Action, pp. 2-3. Applicants disagree with the Examiner, but in order to expedite prosecution Applicants have amended claim 58 to recite a method of making a food product from cruciferous plants. Applicants believe this amendment along with the cancellation of claim 52 fully addresses the Office's rejections.

Applicant respectfully requests reconsideration and withdrawal of the rejection.

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### CONCLUSION

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date March 29, 2007

By Richard C. Peet

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Telephone: (202) 672-5483  
Facsimile: (202) 672-5399

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,989	04/05/2001	Jed W. Fahey	046585/0138	4463

22428 7590 04/09/2007  
 FOLEY AND LARDNER LLP  
 SUITE 500  
 3000 K STREET NW  
 WASHINGTON, DC 20007

EXAMINER
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KRASS, FREDERICK F

ART UNIT	PAPER NUMBER
1614	

MAIL DATE	DELIVERY MODE
04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/825,989	FAHEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Frederick Krass	1614	

All participants (applicant, applicant's representative, PTO personnel):

(1) Frederick Krass

(3) \_\_\_\_\_

(2) Mr. Berkowitz

(4) \_\_\_\_\_

Date of Interview: 27 March 2007.

Type: a) Telephonic b) Video Conference  
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: all.

Identification of prior art discussed: n/a.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant discussed proposed amendments in which the claimed plants would be specified as being cruciferous, and in which new claims would be added drawn to broccoli specifically. Examiner stated the amendments seemed to be acceptable, contingent upon review following their receipt in the case.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

## Summary of Record of Interview Requirements

### **Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record**

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### **Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews**

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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=> que glucosinolate and isothiocyanate  
L1 QUE GLUCOSINOLATE AND ISOTHIOCYANATE

=> que plant or vegetable or sprout or cruciferous or broccoli  
L2 QUE PLANT OR VEGETABLE OR SPROUT OR CRUCIFEROUS OR BROCCOLI

=> que extract?  
L3 QUE EXTRACT?

=> s 11 and 12 and 13  
2465 GLUCOSINOLATE  
25498 ISOTHIOCYANATE  
842180 PLANT  
94220 VEGETABLE  
3876 SPROUT  
1124 CRUCIFEROUS  
3123 BROCCOLI  
322054 EXTRACT?  
L4 11 L1 AND L2 AND L3

	Type	L #	Hits	Search Text	DBs
1	BRS	L1	29	glucosinolate and isothiocyanate and (plant or vegetable or sprout or cruciferous or broccoli) and (extract or extracted or extracting) and (chemoprevent\$ or chemoprotect\$)	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWEN T

	Type	L #	Hits	Search Text	DBs
1	BRS	L1	5	glucosinolate.clm. and isothiocyanate.clm. and (plant or vegetable or sprout or cruciferous or broccoli).clm. and (extract or extracted or extracting).clm.	US- PGPUB